

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 30

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

---

Ex parte NORIYUKI KUBODERA  
and  
YASUTO INAGAKI

---

Appeal No. 2001-2677  
Application No. 08/625,008

---

ON BRIEF

---

Before PATE, STAAB, and NASE, Administrative Patent Judges.  
PATE, Administrative Patent Judge.

This is an appeal from the final rejection of claims 2, and 4 through 26. Claims 1, 3, 27, 28, and 29 have been cancelled. Thus, the appealed claims are the only claims remaining in the application.

The claimed subject matter is directed to a method for cutting a ceramic block. A green ceramic block is prepared by laminating a plurality of green ceramic sheets. The ceramic sheets have been formed using an organic binder. The laminated green ceramic sheets which form the green block are heat treated to at least 50°C or higher. This gives the ceramic block a Vickers hardness in the range of 20 to 100 kg/cm<sup>2</sup>. When these blocks are cut with a dicing saw they exhibit surface roughness values within the range of .05 to 0.15 µm.

Claim 8, reproduced below, is further illustrative of the claimed subject matter.

8. A method of cutting a ceramic block, comprising the steps of:

preparing a ceramic green block by laminating a plurality of ceramic green sheets and applying a metallic layer to a surface of at least one of said plurality of ceramic green sheets so as to form an inner metallic portion in said ceramic green block; said ceramic green block including a binder, in an amount of at least 4 percent by weight of the block;

heat treating said ceramic green block at 50 degrees C or higher so as to cure it and improve its hardness, thereby giving said heat treated ceramic block a Vickers hardness in the range of 20 to 100 kg/cm<sup>2</sup>; and

cutting said heat treated ceramic block with a dicing saw.

Appeal No. 2001-2677  
Application No. 08/625,008

The references of record relied upon as evidence of obviousness are:

O'Neill et al. (O'Neill)	3,794,707	Feb. 26, 1974
Wada et al. (Wada)	4,607,316	Aug. 19, 1986

#### REJECTION

Claims 2, and 4 through 26 stand rejected under 35 U.S.C. § 103 as unpatentable over O'Neill in view of Wada.

#### OPINION

We have carefully reviewed the rejection on appeal in light of the arguments of the appellants and the examiner. As a result of this review, we have determined that the applied prior art does not establish a prima facie case of obviousness with respect to the claims on appeal. Therefore, the rejection on appeal is reversed. Our reasons follow.

To summarize the examiner's rationale underlying the rejection, the examiner notes that O'Neill teaches the method steps claimed in claims 8 and 15. The specific range of Vickers hardness and surface roughness called for in these independent claims are stated by the examiner to be a natural consequence of performing the method within the recited range of parameters.

Appeal No. 2001-2677  
Application No. 08/625,008

This conclusion regarding "natural consequences" is based on mere supposition by the examiner. However, speculation and conjecture cannot provide a proper evidentiary basis to support a rejection under § 103.

While the measurement of a physical property may not of itself impart patentability to otherwise unpatentable claims, when the measured property serves to point up the distinction from the prior art, or advantages over the prior art, that property is relevant to patentability, and its numerical parameters can not only add precision to the claims but also may be considered, along with all of the evidence, in determination of patentability. In re Glaug, 283 F.3d 1335, 1341, 62 USPQ2d 1151, 1155 (Fed. Cir. 2002) (citing Pall Corp. v. Micron Separations, Inc., 66 F.3d 1211, 1216, 36 USPQ2d 1225, 1228 (Fed. Cir. 1995) (affirming the district court's definition of "skinless" as a performance characteristic in accordance with the measurements of bubble point, flow time, and KL curve)).

In our view, the claimed Vickers hardness in claim 8 or the surface roughness in claim 15 is part of the heat treating or cutting step respectively. Seen in this manner, it is clear that O'Neill does not disclose these specific steps claimed by appellants.

Appeal No. 2001-2677  
Application No. 08/625,008

We further note the examiner's allegation that the independent claims are silent with respect to critical limitations such as the binder chosen or the property and parameters used in the claimed sawing step. We agree with appellants that the claims are merely broad in these respects, and are not missing critical limitations.

Inasmuch as the examiner has failed to provide a sound evidentiary basis to undergird a prima facie case of obviousness under § 103, the rejection of all claims on appeal is reversed.

REVERSED

WILLIAM F. PATE III	)	
Administrative Patent Judge	)	
	)	
	)	
	)	
	)	BOARD OF PATENT
LAWRENCE J. STAAB	)	APPEALS
Administrative Patent Judge	)	AND
	)	INTERFERENCES
	)	
	)	
	)	
JEFFREY V. NASE	)	
Administrative Patent Judge	)	

WFP:psb

Appeal No. 2001-2677  
Application No. 08/625,008

Ostrolenk Faber Gerb & Soffen  
1180 Avenue of the Americas  
New York, NY 10036-8403